

---

**DEPARTMENT OF THE INTERIOR**
**Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AB38****Endangered and Threatened Wildlife and Plants; Final Rule to List the Plant *Manihot walkerae* as Endangered****AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule.

**SUMMARY:** The U.S. Fish and Wildlife Service (Service) determines *Manihot walkerae* (Walker's manioc) to be an endangered species, under the authority contained in the Endangered Species Act of 1973 (Act), as amended. Walker's manioc is endemic to the Lower Rio Grande Valley of south Texas and northeast Mexico. At present, one natural population is known from Texas. There are no recently verified populations in Mexico, although plants were collected there in the past. This plant may still occur in suitable brush habitat. This species is threatened by brush clearing, livestock grazing, and increased urbanization and recreation. This rule implements the provisions afforded by the Act for the Walker's manioc. Critical habitat is not being designated.

**EFFECTIVE DATE:** November 1, 1991.**ADDRESSES:** The complete file for this rule is available for inspection by

appointment, during normal business hours at the Service's Ecological Services Field Office, c/o Corpus Christi State University, Campus Box 338, 6300 Ocean Dr., Corpus Christi, Texas 78412.

**FOR FURTHER INFORMATION CONTACT:** Rogelio Perez (see **ADDRESSES**) at (512) 888-3346 or FTS 529-3346.

**SUPPLEMENTARY INFORMATION:****Background**

*Manihot walkerae* (Walker's manioc) is a perennial herb that is presently known from only one natural population in the U.S. Historically, the species was first collected by Schott in 1853 at Ringgold Barracks, Starr County, Texas, but this specimen was misidentified as *Manihot carthagenesis*, a species of tropical America (Turner 1982). Subsequent collections were made in 1888, 1940, and 1960. The type specimen was collected by Mrs. E.J. Walker in 1940 and transmitted to H.B. Parks for identification; he in turn transmitted it to V.L. Cory. Cory sent the material for identification to Croizat, who recognized it as a new species. The species was described in 1942. Rogers and Appan (1973), in their monograph of *Manihot* (*Manihotoides*) for the Flora Neotropica, retained *Manihot walkerae* as a valid species.

This member of the spurge family (Euphorbiaceae) is a branched perennial herb that grows to 0.5 meters (1.6 feet). The stems are slender with palmately lobed leaves, 7-10 cm (3-4 inches) long. The tubular flowers are white, somewhat fleshy, 5-10 millimeters (0.2-0.4 inches) long, and either staminate or pistillate. The fruit is a globular capsule about 1 centimeter (0.4 inches) in diameter and splits into three segments. Each fruit produces three seeds.

Walker's manioc occurs in sandy loam soils at an elevation of 100-200 meters (328-656 feet) in the Lower Rio Grande Valley of Texas. It has also been found growing up through protective thorn shrubs on sandy prairie overlying caliche in Tamaulipas, Mexico. This species occurs in undisturbed, native brush dominated by *Acacia* spp. (*acacia*), *Prosopis glandulosa* (mesquite), *Zanthoxylum fagara* (colima), *Pithecellobium flexicaule* (Texas ebony), and *Leucophyllum frutescens* (cenizo). The habitat requirements of Walker's manioc are presently unknown.

One natural population of Walker's manioc is presently known in the U.S. Historically, this species was documented from Starr and Hidalgo Counties, Texas, and the State of Tamaulipas, Mexico. Collections from

natural habitat have been made from only seven localities. The populations in northeastern Tamaulipas may still exist, but their presence has not been verified. Turner (1982) made several attempts over a 5-year period to locate the species in the vicinity of previously known sites and elsewhere in Texas, but failed to locate any plants. Lonard (Pan American University, *in litt.*, 1990) did not find Walker's manioc during searches in wooded sites along the Rio Grande in Texas. Service botanist Philip Clayton discovered the species in 1990 at a previously unrecorded site in Hidalgo County, Texas.

Transplanted specimens are growing at the University of Texas, Austin, and plants are being cultivated at the San Antonio Botanical Gardens in Texas. Brush clearing for cultivation, range improvement, and urban and recreational development has destroyed much of the suitable habitat for Walker's manioc. However, the collector of the type specimen believes that Walker's manioc still occurs in brush habitats. Turner (1982) believes that natural populations still occur along the Rio Grande in areas of previous collections, and Lonard (*in litt.*, 1990) suggested an additional area to survey in Texas.

*Manihot walkerae* is related to the important crop plant, *Manihot esculenta* (cassava), which is a staple food item in many Third World nations today. It may be possible to interbreed Walker's manioc with cassava and thus provide a valuable gene pool for the improvement of this plant. Loss of Walker's manioc could have considerable impacts to humans, judging by the potential it might hold for food and drug purposes (Turner 1982). Walker's manioc could contain genes that provide salt, drought, cold, or disease resistance to commercial cassava. These properties would be beneficial for third world nations.

Section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*) directed the Secretary of the Smithsonian Institution to prepare a report of those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the *Federal Register* (40 FR 27823) of its acceptance of the Smithsonian Institution report as a petition within the context of section 4 of the Act and of its intention to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant

species to be endangered species pursuant to section 4 of the Act.

This list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975, *Federal Register* publication. Walker's manioc was included in the July 1, 1975, notice of review and in the June 16, 1976, proposal.

The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. Subsequently, on December 10, 1979 (44 FR 70796), the Service published a notice of the withdrawal of the portion of the June 16, 1976, proposal that had not been made final, along with other proposals that had expired; this notice of withdrawal included Walker's manioc.

On December 15, 1980 (45 FR 82480), September 27, 1985 (50 FR 39526), and February 21, 1990 (55 CFR 6184), the Service published updated notices reviewing the native plants being considered for classification as threatened or endangered. Walker's manioc was included in these notices as a category 1 species. Category 1 comprises taxa for which the Service has sufficient biological data to support proposing them as endangered or threatened.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make findings on certain pending petitions within 1 year of their receipt. Section 2(b)(1) of the Act's Amendments of 1982 further requires that all petitions pending on October 12, 1982, be treated as having been newly submitted on that date. Because Walker's manioc was included in the 1980 notice, the petition to list this species was treated as being newly submitted on October 12, 1982. In 1983, 1984, 1985, 1986, 1987, 1988, and 1989, the Service made the required 1-year findings that listing of Walker's manioc was warranted, but precluded by other listing actions of higher priority. Biological data, supplied by Turner (1982), fully support the listing of Walker's manioc. A proposed rule to determine endangered status for Walker's manioc was published in the *Federal Register* on October 1, 1990 (55 FR 39989).

#### Summary of Comments and Recommendations

In the October 1, 1990 proposed rule and associated notifications, all interested parties were requested to

submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice inviting public comment was published in the *McAllen Monitor* on October 21, 1990. However, it contained an error and was correctly published on October 30, 1990. One comment was received within the comment period, and it supported the listing of Walker's manioc.

#### Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that Walker's manioc should be classified as an endangered species. Procedures found at Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to *Manihot walkerae* Croizat (Walker's manioc) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Walker's manioc is endemic to the Lower Rio Grande Valley of Texas and northeastern Mexico. Since the early 1900's, over 90 percent of the brushland in this area has been cleared for agriculture, urban development, and recreation (USFWS 1985). Over 90 percent of the riparian habitat has been destroyed, and a large percentage of similar habitat has been cleared in Mexico (Collins 1984). Estimates of remaining native brush range from 1 to 5 percent of the original vegetation. (Jahrsdoerfer and Leslie 1988). Water development on the Rio Grande has substantially reduced river flow, resulting in altered riparian habitats and additional brush clearing. Brush is destroyed by mechanical clearing, herbicides, and fire (Jahrsdoerfer and Leslie 1988).

Walker's manioc is near extinction because of extensive conversion of the Lower Rio Grande Valley brushland to cropland and improved pasture in Texas and adjoining Mexico. Land that remains in native vegetation is used for cattle production and is often severely overgrazed. Attempts to locate previously known sites for Walker's manioc in Texas have been unsuccessful

(Lonard, *in litt.*, 1990; Turner 1982). A new site for Walker's manioc was discovered recently in Hidalgo County. Existing populations in Mexico are under severe threat because of overgrazing and intensive agriculture (Turner, University of Texas at Austin, *in litt.*, 1982).

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** None known. Because of its rarity, Walker's manioc is of interest to botanists, plant breeders, and possibly to drug companies. Walker's manioc may contain genes that provide salt, drought, cold, or disease resistance to commercial cassava. This species may also contain biodynamic compounds useful for the treatment of human diseases. Therefore, collection is a minor but present threat.

**C. Disease or predation.** While cattle grazing or trampling may not kill mature plants with an established root system, these actions may kill seedlings and affect the reproduction of mature plants, thereby reducing recruitment rates in the population.

**D. The inadequacy of existing regulatory mechanisms.** Walker's manioc is not currently protected by either Federal or State law in the U.S. or Mexico. The Act provides protection and encourages active management through the "Available Conservation Measures" discussed below.

**E. Other natural or manmade factors affecting its continued existence.** Scarcity and limited distribution make this species vulnerable to both natural and human threats. Any further reduction in plant numbers could reduce the reproductive capabilities and genetic potential of the species.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Manihot walkerae* as endangered without critical habitat. This status is appropriate because the previously known populations in the U.S. have been eliminated and only one natural population is presently known. The previously recorded site in Mexico is in an area of heavy grazing and cultivation. The reasons for not designating critical habitat are discussed below.

#### Critical Habitat

Section 4(a)(3) of the Act, as amended, requires, to the maximum extent prudent and determinable, that the Secretary designate critical habitat at the time a species is determined to be endangered

or threatened. The Service finds that designation of critical habitat is not presently prudent for this species. Only one natural population of Walker's manioc is known at the present. No direct attention should be drawn toward the species or its location. Any type of publicity on this species could make it susceptible to increased visitation or collection, which would be detrimental to the survival of this rare plant. As discussed under Factor B in the Summary of Factors Affecting the Species, Walker's manioc is threatened by taking, an activity difficult to enforce against any only regulated by the Act with respect to plants in cases of: (1) Removal and reduction to possession of listed plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging up, or damaging or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Such provisions are difficult to enforce, and publication of a critical habitat description and map would make Walker's manioc more vulnerable and increase enforcement problems.

The only known natural population of Walker's manioc is found on private lands where Federal involvement in land-use activities does not generally occur. In general, additional protection resulting from critical habitat designation is often achieved through the section 7 Consultation process. Since section 7 would not apply to the majority of land-use activities occurring within critical habitat in this instance, its designation would not appreciably benefit the species.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing

this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. There are no known populations of Walker's manioc that either occur on Federal land and/or would be affected by activities authorized, funded, or carried out by a Federal agency. However, the plant likely occurs in other suitable habitat, including national wildlife refuge lands, in the Lower Rio Grande Valley. In the Lower Rio Grande Valley, the International Boundary and Water Commission clears brush for the purpose of maintaining flood capacity within the river floodway and interior floodways on the U.S. side of the Rio Grande. The U.S. Army Corps of Engineers also authorizes pipeline construction projects within the area. If it is determined that such activities could have an effect on Walker's manioc, section 7 consultation would have to be initiated.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, sell or offer for sale this species in interstate or foreign commerce, or to remove and reduce to possession the species from areas under Federal jurisdiction. In addition, for endangered plants, the 1988 amendments (Pub. L. 100-478) to the Act prohibit the malicious damage or destruction on Federal lands and the removal, cutting, digging up, or damaging or destroying of endangered plants in knowing violation of any State law or regulation, including State criminal trespass law. Certain exceptions apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances.

It is anticipated that few trade permits would ever be sought or issued because the species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, P.O. Box 3507, Arlington, VA 22201 (703/358-2104).

#### National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

#### References Cited

Collins, K. 1984. Status and management of native south Texas brushlands. U.S. Fish and Wildlife Service, Ecological Services, Corpus Christi, TX. 18 pp.

Jahrsdoerfer, S.E., and D.M. Leslie, Jr. 1988. Tamaulipan brushland of the Lower Rio Grande Valley of south Texas: description, human impacts, and management options. U.S. Fish and Wildlife Service, Biological Report 88(36). 63 pp.

Rogers, D.M., and S.G. Appan. 1973. *Manihot*, *Manihotoides* (Euphorbiaceae). Flora Neotropica, Monograph No. 13, pp. 63-65. Hafner Press, New York.

Turner, B.L. 1982. Status report, *Manihot walkerae* Croizat. U.S. Fish and Wildlife Service, Albuquerque, NM. 9 pp.

U.S. Fish and Wildlife Service. 1985. Department of the Interior land protection plan for Lower Rio Grande Valley National Wildlife Refuge in Cameron, Hidalgo, Starr, and Willacy Counties, Texas. Albuquerque, NM. 19 pp.

#### Author

The primary author of this final rule is Sonja Jahrsdoerfer, U.S. Fish and Wildlife Service, 222 South Houston, suite A, Tulsa, OK 74127 (918/581-7458 or FTS 745-7458).

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

#### Regulation Promulgation

#### PART 17—[AMENDED]

Accordingly, part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Euphorbiaceae, to the List of Endangered and Threatened Plants:

#### § 17.12 Endangered and threatened plants.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Euphorbiaceae—Spurge family:						
<i>Manihot walkerae</i> .....	Walker's manioc .....	U.S.A. (TX), Mexico .....	E	446	NA	NA

Dated: September 25, 1991.

Richard N. Smith,

Acting Director, Fish and Wildlife Service.

[FR Doc. 91-23639 Filed 10-1-91; 8:45 am]

BILLING CODE 4310-55-M